

Montana Teen Driver Education and Training

Module 5.1

Adverse Conditions

Objectives

- Know how weather, surface conditions and visibility create adverse driving conditions.
- Use Zone Control principles to identify adverse driving conditions.
- Develop the skill necessary to drive in adverse conditions.
- Describe how to prepare for adverse conditions.

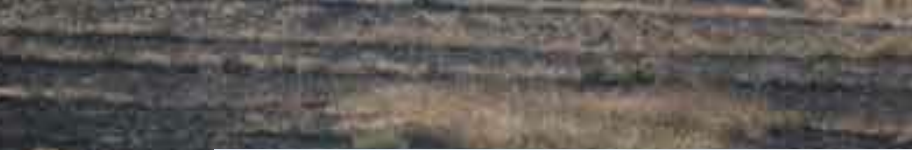
What are Adverse Conditions?

- Adverse: “bad or unfavorable, not good.”
- Weather and atmospheric conditions
- Roadway and surface conditions
- Light and glare or darkness

Zone Control for Adverse Conditions

- **Find**—Identify the adverse condition as a closed zone.
- **Solve**—Check related zones, adjust speed and lane position for conditions.
- **Control**—Make sure your solution works and make adjustments as needed.

ADVERSE WEATHER AND ATMOSPHERIC CONDITIONS



Good Solution?



Hover mouse over screen to use play bar



Glare



Unlighted Highway



Fog



Glare and Rain

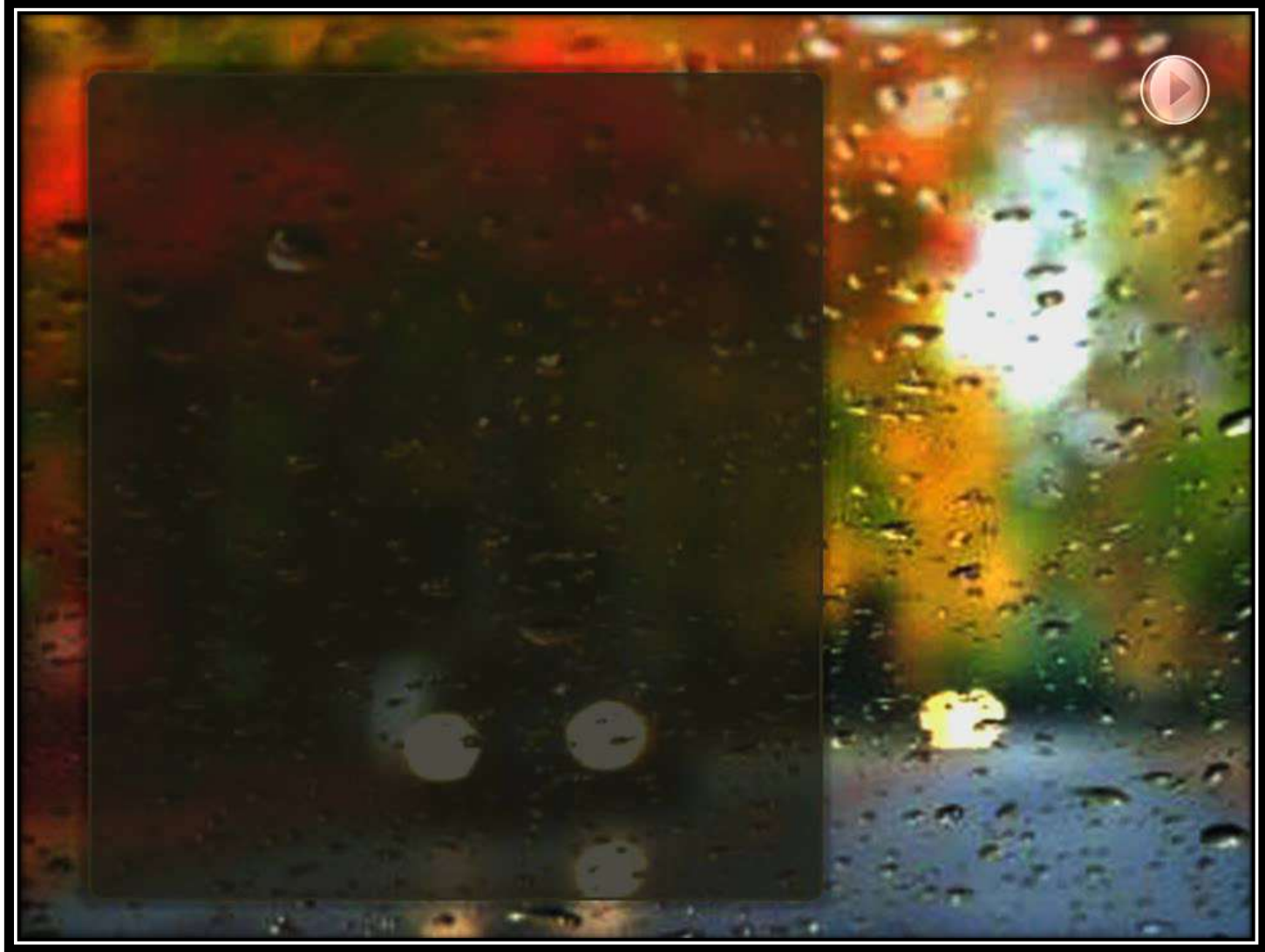




Low Light and Rain

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Managing Adverse Conditions



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Vehicle Lights

Lights must be dimmed when oncoming vehicles are within 1,000 feet and 500 feet of overtaking a vehicle

Low beams must show vehicles and people at 100 feet ahead

High beams must show vehicles and people at 350 feet ahead

Brake lights must be RED or AMBER and be visible 100 feet in sunlight

Headlights on a half hour after sunset until a half hour before sunrise or whenever visibility can't be seen at 500 feet or less

All vehicles must have two red taillights that can be seen for 500 feet

Can You Stop in Time?



Speed	Rate of travel	Four seconds front space	Stopping distance: passenger car, good traction	Can you stop in time? Low beam/High beam
45 mph	68 Ft./Sec	272 Feet	158 Feet	Yes / Yes
50 mph	74 Ft./Sec	296 Feet	190 Feet	No / Yes
55 mph	83 Ft./Sec	332 Feet	233 Feet	No / Yes
60 mph	88 Ft./Sec	352 Feet	275 Feet	No / No



ADVERSE CONDITIONS: ROADWAY SURFACE

Hydroplaning

Even good tires can't grip the road when you drive too fast for conditions.

Hydroplaning can happen at speeds as low as 35 mph.



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What other roadway conditions require you to drive at speeds lower than the posted speed?





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Skid Recovery



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Hot Weather

Outside the vehicle

Inside the vehicle

Vehicle operating
at extremes





Hot Weather

Outside the vehicle

- Summertime brings out thousands of joggers and cyclists—be aware of them and share the road.
- Drive in the cooler parts of the day.
- Take breaks on long drives.



Hot Weather

Inside the vehicle

- Never leave a child or pet in a parked car in summer heat. The outside temperature in the 80s can quickly bring a car's interior to well over 140°.
- Always lock the doors and trunk—even at home—and keep keys out of children's reach.
- Watch children closely around cars, particularly when loading and unloading.



Hot Weather

Inside the vehicle

- Check to ensure that all children are accounted for when leaving the vehicle.
- Don't overlook sleeping infants in the back seat.
- Check the surface temps of seats, car seats, and boosters.



Hot Weather

Vehicle Operation

- Prepare the vehicle to take the stress of high temperatures in the summer
 - ☐ Check tire air pressure
 - ☐ Check the air conditioner
 - ☐ Check engine coolant

Working together make a list of what you need to do to prepare for driving in cold weather and hot weather.

WHAT SHOULD YOU DO TO PREPARE?

Preparing for Adverse Conditions

- Food
- Water
- Warm Clothing
- Blanket
- Reflective or high visibility apparel
- Cell Phone
- First Aid Kit
- Full tank of gas
- Tires with good tread
- Studded snow tires
- Chains
- Flares or reflective markers
- GPS **and** map
- Small shovel
- Sand or kitty litter

[MDT Winter Survival Guide](#)

Before you go ...

- Check the weather forecast.
- [MDT Travel App](#)
- Plan your route and tell your parents, family member or friend.
- Stick to your route.
- Update parents or friends when route changes.

Adverse Conditions Summary

Know:

- The dangers of driving in adverse conditions.
- What you are capable of.
- What your car is capable of.
- Your limitations—it's ok to say you shouldn't drive.

When driving conditions are unfavorable,
you don't have to drive –
stay home and stay safe!

Montana Driver Education and Training Standards and Benchmarks

1. Laws and Highway System

- 1.1. know the laws outlined in the Montana Driver's manual;
- 1.2. understand the laws outlined in the Montana Driver's Manual; and
- 1.3. consistently demonstrate knowledge and understanding by responsible adherence to highway transportation system traffic laws and control devices.

2. Responsibility

- 2.1. recognize the importance of making safe and responsible decisions for owning and operating a motor vehicle;
- 2.2. demonstrate the ability to make appropriate decisions while operating a motor vehicle;
- 2.3. consistently display respect for other users of the highway transportation system; and
- 2.4. develop positive habits and attitudes for responsible driving.

3. Visual Skills

- 3.1. know proper visual skills for operating a motor vehicle;
- 3.2. communicate and explain proper visual skills for operating a motor vehicle;
- 3.3. demonstrate the use of proper visual skills for operating a motor vehicle; and
- 3.4. develop habits and attitudes with regard to proper visual skills.

4. Vehicle Control

- 4.1. demonstrate smooth, safe and efficient operation of a motor vehicle; and
- 4.2. develop positive habits and attitudes relative to safe, efficient and smooth vehicle operation.

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Montana Driver Education and Training

Standards and Benchmarks

5. Communication

- 5.1. consistently communicate driving intentions (i.e., use of lights, vehicle position, and personal signals);
- 5.2. adjust driver behavior based on observation of the highway transportation system and other roadway users;
- 5.3. adjust communication (i.e., use of lights, vehicle position, and personal signals) based on observation of the highway transportation system and other users; and
- 5.4. develop positive habits and attitudes for effective communication.

6. Risk Management

- 6.1. understand driver risk-management principles;
- 6.2. demonstrate driver risk-management strategies; and
- 6.3. develop positive habits and attitudes for effective driver risk-management.

7. Lifelong Learning

- 7.1. identify and use a range of learning strategies required to acquire or retain knowledge, positive driving habits, and driving skills for lifelong learning;
- 7.2. establish learning goals that are based on an understanding of one's own current and future learning needs; and
- 7.3. demonstrate knowledge and ability to make informed decisions required for positive driving habits, effective performance, and adaptation to change.

8. Driving Experience

- 8.1. acquire at least the minimum number of BTW hours over at least the minimum number of days, as required by law, with a Montana-approved driver education teacher; and
- 8.2. acquire additional behind-the-wheel driving experience with a parent or guardian's assistance in a variety of driving situations (i.e., night, adverse weather, gravel road, etc.).